

Rec'd PCT/PTO 02 APR 2002

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|--|---------------------------|---|--|---|
| FORM PTO-1390<br>(REV 10-94)   |                           | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE |  | ATTORNEY'S DOCKET NUMBER  |
| TRANSMITTAL LETTER TO THE UNITED STATES<br>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br>CONCERNING A FILING UNDER 35 U.S.C. 371   |                           |   |  | 7885.83USWO   |
|  |                           |   |  | U.S. APPLICATION NO. (If known, see 37 C.F.R. 1.5)<br>Unknown 10/089673 |
| INTERNATIONAL APPLICATION NO.  | INTERNATIONAL FILING DATE | PRIORITY DATE CLAIMED                                   |  |   |
| PCT/NO00/00333   | 9 October 2000            | 8 October 1999  |  |   |
| TITLE OF INVENTION<br>SYSTEM COMPRISING A SCREW AND A TOOL THEREFOR  |                           |   |  |   |
| APPLICANT(S) FOR DO/EO/US<br>Jone EDLAND   |                           |   |  |   |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:  |                           |   |  |   |
| <ol style="list-style-type: none"> <li><input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li><input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li><input checked="" type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).</li> <li><input checked="" type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.</li> <li><input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))               <ol style="list-style-type: none"> <li><input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau).</li> <li><input checked="" type="checkbox"/> has been transmitted by the International Bureau.</li> <li><input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li><input type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)).</li> <li><input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))               <ol style="list-style-type: none"> <li><input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).</li> <li><input type="checkbox"/> have been transmitted by the International Bureau.</li> <li><input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li><input checked="" type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li><input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li><input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li><input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> |                           |   |  |   |
| <b>Items 11. to 16. below concern document(s) or information included:</b>   |                           |   |  |   |
| 11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.   |                           |   |  |   |
| 12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.   |                           |   |  |   |
| 13. <input checked="" type="checkbox"/> A FIRST preliminary amendment.<br><input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.   |                           |   |  |   |
| 14. <input type="checkbox"/> A substitute specification.   |                           |   |  |   |
| 15. <input type="checkbox"/> A change of power of attorney and/or address letter.  |                           |   |  |   |
| 16. <input checked="" type="checkbox"/> Other items or information: Form PCT/IPEA/409  |                           |   |  |   |

U.S. APPLICATION NO. (If known, see 37 C.F.R. 1.5)

Unknown

10/089673

INTERNATIONAL APPLICATION NO

PCT/NO00/00333

ATTORNEY'S DOCKET NUMBER

7885.83USWO

17. [X] The following fees are submitted:

**BASIC NATIONAL FEE (37 CFR 1.492(a) (1)-(5)):**

Search Report has been prepared by the EPO or JPO.....\$890.00

International preliminary examination fee paid to USPTO  
(37 CFR 1.492(a)(1)).....\$710.00No international preliminary examination fee paid to USPTO (37 CFR 1.482)  
but international search fee paid to USPTO (37 CFR 1.445(a)(2)).....\$740.00Neither international preliminary examination fee (37 CFR 1.482) nor  
international search fee (37 CFR 1.445(a)(3)) paid to USPTO .....\$1040.00International preliminary examination fee paid to USPTO (37 CFR 1.482)  
and all claims satisfied provisions of PCT Article 33(2)-(4) .....\$100.00**CALCULATIONS PTO USE ONLY****ENTER APPROPRIATE BASIC FEE AMOUNT = \$1040.00**Surcharge of \$130.00 for furnishing the oath or declaration later than [ ] 20 [ ] 30  
months from the earliest claimed priority date (37 CFR 1.492(e)).

\$

| CLAIMS             | NUMBER FILED | NUMBER EXTRA | RATE      |
|--------------------|--------------|--------------|-----------|
| Total claims       | 9            | -20 =        | X \$18.00 |
| Independent claims | 3            | -3 =         | X \$80.00 |

\$

\$

MULTIPLE DEPENDENT CLAIM(S) (if applicable) + \$260.00

\$

**TOTAL OF ABOVE CALCULATIONS = \$1040.00**Reduction by 1/2 for filing by small entity, if applicable. Small entity status is claimed  
pursuant to 37 CFR 1.27

\$ 520.00

**SUBTOTAL = \$ 520.00**Processing fee of \$130.00 for furnishing the English translation later than [ ] 20 [ ] 30  
months from the earliest claimed priority date (37 CFR 1.492(f)).

+ \$

**TOTAL NATIONAL FEE = \$ 520.00**Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be  
accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property

+ \$

**TOTAL FEES ENCLOSED = \$ 520.00**Amount to be:  
refunded

\$

charged

\$

a. [X] Check(s) in the amount of \$520.00 to cover the above fees is enclosed.

b. [ ] Please charge my Deposit Account No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ to cover the above fees.  
A duplicate copy of this sheet is enclosed.c. [X] The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any  
overpayment to Deposit Account No. 13-2725.**NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR  
1.137(a) or (b)) must be filed and granted to restore the application to pending status.**

SEND ALL CORRESPONDENCE TO

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REGISTRATION NUMBER: 32,960

10/089673

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S/N unknown

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

|                  |   |                    |                     |
|------------------|---|--------------------|---------------------|
| Applicant:       | Jone EDLAND                                   | Docket No.:        | 7885.83USWO         |
| Serial No.:      | unknown                                       | Filed:             | concurrent herewith |
| Int'l Appln No.: | PCT/NO00/00333                                | Int'l Filing Date: | 9 October 2000      |
| Title:           | SYSTEM COMPRISING A SCREW AND A TOOL THEREFOR |                    |                     |

CERTIFICATE UNDER 37 CFR 1.10

'Express Mail' mailing label number: EV036308822US

Date of Deposit: 2 April 2002

I hereby certify that this correspondence is being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

By: 

Name: Chris Stordahl

PRELIMINARY AMENDMENT

Box PCT  
Assistant Commissioner for Patents  
Washington, D. C. 20231

Dear Sir:

In connection with the above-identified application filed herewith, please enter the following preliminary amendment, which is based on claims amended in prosecution of the international application and published in the International Preliminary Examination Report, a copy of which is enclosed herewith:

IN THE ABSTRACT

Insert the attached Abstract page into the application as the last page thereof.

IN THE SPECIFICATION

A courtesy copy of the originally-filed PCT specification is enclosed herewith, but the World Intellectual Property Office (WIPO) copy should be relied upon if it is already in the U.S. Patent Office.

Please insert the following two paragraphs beginning on line 1, page 2.

EP 1039151 shows a TORX-screw with corresponding tool. The screw has an ordinary TORX slot and a circular recess below this. This recess has the same diameter as the internal diameter of the TORX slot. The recess is very shallow. Even though it is said to prevent the screw from falling off the tool, this shallow recess has in fact very little effect. The screw shown has a cylindrical head. If the head was conical, the depth of the recess would have to be further reduced or the depth of the slot would have to be reduced. In any case it would be difficult to make the recess any deeper than shown, since the diameter is so large.

US 6017177 shows a screw with a TORX slot; several embodiments are shown. However, the TORX slot is situated at the bottom of a cavity. Below the TORX slot there is a recess. If the screw head had been conical very little room had been left for the recess. Consequently, this type of screw is limited to cylindrical heads only.

#### IN THE CLAIMS

Please amend the following claims as indicated below. A marked-up copy of all claims is attached for reference.

3. (amended) System according to Claim 1, wherein the first recess (3) and the second recess (11) have substantially the same depth.

6. (amended) Screw according to Claim 4, wherein the first recess (3) and the second recess (11) have substantially the same depth.

9. (amended) Screw tool according to Claim 7, wherein the central point (17) and the engagement section (16) have substantially the same length.

REMARKS

The above preliminary amendment is made to add language to the specification and to remove multiple dependencies from claims 3, 6 and 9.

A new abstract page is supplied to conform to that appearing on the publication page of the WIPO application, but the new Abstract is typed on a separate page as required by U.S. practice.

Applicant respectfully requests that the preliminary amendment described herein be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.

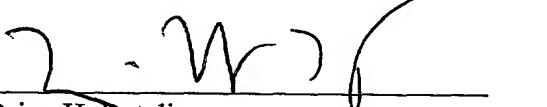
If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's primary attorney-of record, John J. Gresens (Reg. No. 33,112), at (612) 371.5265.

Respectfully submitted,

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Dated: 2 April 2002

JJG(BHB)/kjr

By   
Brian H. Batzli  
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**ABSTRACT**

System comprising a screw and a tool (6) therefore, in which the screw head (1) with a slot (2), the slot (2) having a first recess (3) with an approximately straight-walled cross section, and the tool being provided with an engagement section (16) that is complementary to the first recess (3). The slot has a second recess (11) at the bottom of the first recess (3), with a smaller diameter than that of the first recess (3), and the tool (6) is provided with a central point (17) that complements the second recess (11). The second recess (11) has a circular cross section and the central point (17) of the tool (6) has a circular cross section.

**MARKED UP COPY OF CLAIMS**

3. System according to Claim 1[ or 2], wherein the first recess (3) and the second recess (11) have substantially the same depth.

6. [System]Screw according to Claim 4[ or 5], wherein the first recess (3) and the second recess (11) have substantially the same depth.

9. Screw tool according to Claim 7[ or 8], wherein the central point (17) and the engagement section (16) have substantially the same length.

System comprising a screw and a tool therefor

The present invention relates to a system comprising a screw and a tool; a screw constituting part of the system and a tool constituting part of the system, as stated in the preamble of Claim 1, 4 or 7.

Screws are known to feature a number of differently shaped slots. The oldest screw slot is a straight slot that extends diametrically across the screw head. In order to screw such a screw, use is made of a screwdriver that has a flat front with a straight front edge.

The straight slot has several well-known disadvantages. Therefore, new screw slots have been developed with a view to avoiding these disadvantages. Among these are the cross-slots, which mainly appear as Philips® slots and Pozidrive® slots.

At the end of the 1960s, the Torx® slot appeared. This has been described in detail in NO 128968. In the axial direction, this screw slot has the general shape of a star with six points, where the points are slightly rounded. The walls of the slot that extend down into the screw head are straight. The tool has been designed to be complementary to the slot. The Torx® slot remedies many of the disadvantages that are associated with for instance cross-slots. For all that, the Torx® slot still has some serious disadvantages. Since the walls are straight, the slot depth will be limited, particularly in conical screw heads, or so-called countersunk heads. If the depth becomes too great, the walls of the screw head will become very thin at the bottom of the slot, and the screw head may easily break off in this area.

Due to the depth limitation, the engagement between the tool and the slot will not be very good, and the tool may wobble as the screw is screwed in or out. The limited engagement between the tool and the screw also causes the screw to hang badly off the tool when the tool and the screw are held approximately horizontally. For craftsmen who have to screw a great number of screws, it is of great importance that the screw hangs on the tool until the screw has caught in the material into which it is being screwed. As the tool wears, its ability to retain the screw will worsen.



Often, magnetic screw bit holders are used in order to get the screw to sit/hang better on the tool (the bit). However, the bit may easily ride out of the slot if the direction at which the tool is kept deviates from the axial direction of the screw. The depth of the slot is small, and the bit and the slot have opposing tolerance limits within the standard of tolerance. Besides, not all screws are made of magnetic materials.

Several attempts have been made at designing screw slots that alleviate the above-mentioned problem.

10 A screw that features a slot with a polygonal cross section has been described in GB 2329947. One embodiment shows a screw slot made up of three steps down into the screw head. The top step has the greatest cross sectional area, the next step a slightly smaller cross sectional area, and the lowest step has the smallest cross sectional area. All the steps have a polygonal cross section. The tool for operating this screw  
15 incorporates steps with different cross sectional areas, each step complementing a step in the cross section of the slot.

A screw featuring a slot that, in principle, is identical to the above-mentioned slot has been described in GB 1150382. However, this slot consists of only two steps.

20

The above-mentioned screw slots have a number of serious disadvantages. As all the steps have been designed to transmit torsion, even a minor inaccuracy in the slot will result in a mismatch between the tool and one of the steps, thus making it difficult or impossible to insert the tool into the slot. Even if the tool fits in the slot, it may still be  
25 difficult to insert. The tool must be aligned very carefully with the screw slot, which obviously results in loss of time.

The screw slot is of a complex design that may entail an increase in manufacturing costs. However, these manufacturing costs will still be minor compared with the cost of  
30 producing a tool as complex as that which is shown in the two above-mentioned publications. The cost of the tool is therefore unduly high.

EP 1039151 shows a TORX-screw with corresponding tool. The screw has an ordinary TORX slot and a circular recess below this. This recess has the same diameter as the internal diameter of the TORX slot. The recess is very shallow. Even though it is said to prevent the screw from falling off the tool, this shallow recess have in fact very little effect. The screw  
5 shown has a cylindrical head. If the head was conical, the depth of the recess would have to be further reduced or the depth of the slot would have to be reduced. In any case it would be difficult to make the recess any deeper than shown, since the diameter is so large.

US 6017177 shows a screw with a TORX slot. several embodiments are shown. However, the  
10 TORX slot is situated at the bottom of a cavity. Below the TORX slot there is a recess. If the screw head had been conical very little room had been left for the recess. Consequently, this type of screw is limited to cylindrical heads only.

DE 4413782 shows a screw with a first, tapered step for transmission of torsion, the top of which has a circular or hexagonal cross section, and the bottom of which has a hexagonal cross section. Below this is a second, hexagonal step with straight walls.

5 In addition to the fact that this system has several of the disadvantages that characterise the first two mentioned screw slots, such as the complexity and cost of the tools, the screw slot according to DE 4413782 has a further, considerable disadvantage. If, during operation, the tool is pulled fractionally away from the screw in the axial direction, the tool will disengage from the first tapered step. By so doing, all torsion will be  
10 transmitted through the second step alone. This step has a significantly smaller diameter than the first step, and the strain on the tool and the screw increases considerably. Thus, there is a risk of destroying the tool or "rounding" the hole.

EP 257664 shows a cross-slotted screw head in which the upper step is a conventional  
15 cross-slot and the lower step is a polygon with straight walls. Both a conventional screwdriver for a cross-slotted screw and a specially adapted screwdriver may be used with this. This slot also has many of the above-mentioned disadvantages. The specially adapted screwdriver is complex and costly to produce. It also has that disadvantage which is common to all generally conical slots, which is that the screwdriver is inclined  
20 to move away from the screw in the axial direction. If this happens, the area of contact is reduced, and the strain on the slot and the screwdriver will increase. In particular, the strain on the lower, smaller diameter step will increase, and the tool or the screw may easily be damaged in this area.

25 The object of the present invention is to provide a system consisting of a slotted screw and a tool, in which good contact is established between the screw and the tool, so as to enable the screw to be held on the tool without falling off, and in which good contact between the screw slot and the tool is achieved without the risk of a small axial movement of the tool away from the screw significantly increasing the risk of damage  
30 to the slot or the tool; in which is achieved a tool that is easy to produce and which does not entail significant cost increases, and in which it is possible to use a conventional, standard tool in a screw slot according to the present invention with the same effect as if it were used in a conventional, standard screw slot.

It is also an object of the present invention to achieve the above-mentioned object without weakening the walls of a conical screw head.

5 According to the present invention, this is achieved by means of the characteristics that appear in the characterising clause of Claim 1, 4 or 7.

The invention will now be described by way of an example of an embodiment, with reference to the accompanying figures, in which:

10

Figure 1 shows a section through a front part of a tool according to the present invention,

15

Figure 2 shows a section through a screw head with a slot according to the present invention, in which has been placed a tool according to the present invention, and

Figure 3 is a plan view of a screw head with a slot according to the present invention.

20

The example of an embodiment shows a screw head with a Torx® slot. However, the invention is not limited to this type of slot, and may easily be adapted to other types of slots that feature substantially straight walls. A plan view of a screw head 1 with a Torx® slot 2 is shown in figure 3. The slot 2 is a recess 3 in the screw head, shaped as a star with six points, and consisting of rounded points 4 that extend outwards from an imaginary circle 5. Depending on the direction of rotation, a tool 6 (see figures 1 and 2)

25

will engage contacting surfaces 7 and 8 on one side or the other of each point 4.

Figure 2 shows a section through screw head 1. The recess 3, the walls 9 of which are approximately straight, extends down into the screw head 1. The cross section of the recess 3 retains the shape of a star with six points throughout the straight-walled part.

30

The depth of the recess 3 is limited by the minimum allowable wall thickness 10 at the bottom of the recess 3.

The screw slot 2 according to the present invention comprises a further, central recess 11 at the bottom of the six-pointed recess 3. This central recess 11 has a circular cross section and a significantly smaller diameter than recess 3. The walls 12 of the central recess 11 may be approximately straight, but are preferably slightly inclined so that the bottom 13 of the recess 11 has a diameter that is slightly smaller than that of the upper part 14 of the recess 11.

A downward sloping transition surface 15 is formed between the upper part 14 of the central recess 11 and the walls 9 of the six-pointed recess 3.

The tool 6 has an engagement section 16 that is designed to engage the recess 3. The shape of the engagement section 16 complements the shape of the recess 3, but has a slightly smaller diameter than the recess 3, so as to allow it to be inserted into the recess 3 without difficulties, in the same manner as for existing tool-slot combinations.

The tool also has a central point 17 with a circular cross section. The diameter of the centre point 17 is slightly smaller than that of the central recess 11. A surface 18 extends from the central point 17 to the engagement section 16. The angle of inclination of the surface 18 is smaller than that of the transition surface 15. Thus, a space 19 is formed between the surfaces 15 and 18 when a tool 6 is inserted into the slot 2. The space 19 diverges towards the central point 17. This ensures that the tool engages the walls 9 of the recess 3 across the entire height of the recess 3, thereby ensuring maximum engagement between the engagement section 16 of the tool and the recess 3.

Furthermore, in the case of screws that have undergone surface treatment, the diverging space 19 allows any excess coating to collect in the space 19 without obstructing the engagement between the tool and the slot. If no space 19 had been provided, coating residue would settle on the surface 15 and at the bottom 13 of the recess 11, and thereby prevent sufficient engagement between the tool 6 and the screw slot 2.

The central point 17 and the recess 11 ensure longer-lasting, efficient engagement between the tool 6 and the slot, and allows the screw to remain on the tool without

falling off, through friction. The angular movement (wobbling) between the tool and the screw is also reduced considerably.

The central point 17 may, as shown, have a length that is shorter than the height of the recess 3, so as to enable the engagement section 16 of the tool 6 to engage the recess 3 before the central point 17 engages the recess 11. The tool may however also have a central point 17 that is longer than the height of the recess 3, so as to enable the central point 17 to engage the recess 11 before the engagement section 16 engages the recess 3. This facilitates the insertion of the tool into the slot, as the central point 17 is inserted into the recess 3, possibly hits the sloping transition surface 15, and slides into the recess 11. Thus, the tool need only be rotated about the central point 17 in order to bring the engagement section 16 into alignment with the recess 3.

The screw slot does not preclude the use of a conventional tool without a central point 17, but the advantages afforded by the central point 17 and the recess 11 will not be obtained. As such, screws featuring a slot according to the present invention may be produced without considering the types of tool available to craftsmen and others, as the recess 3 is of a conventional design, e.g. the Torx® type.

A craftsman wishing to make use of the advantages of the slot may simply purchase a tool according to the present invention at a later date.

1.

5 System comprising a screw and a tool (6) therefor, in which the screw has a screw head (1) with a top surface and a slot (2), the slot (2) having a first recess (3) adjoining the top surface, the slot (2) having an approximately straight-walled cross section, and the tool is provided with an engagement section (16) that is complimentary to the first recess (3), and where the slot has a second recess (11) at the bottom of the first recess (3), with a smaller diameter than  
10 that of the first recess (3), and the tool (6) is provided with a central point (17) that complements the second recess (11), the recess (3) is shaped as a star with six points viewed in the axial direction of the screw, in accordance with the Torx® standard (e.g. ISO 10664), the second recess (11) has a circular cross section, and the central point (17) of the tool (6) has a circular cross section, w h e r e i n the screw comprises a transition surface  
15 (15) between the first (3) and second (11) recess, which extends to the second recess at a first angle, and the tool (6) comprises a surface (18) between the engagement section (16) and the central point (17), which extends to the central point (17) at a second angle, the first angle being steeper than the second angle, so that a space (19) is formed between the transition surface (15) and the surface (18) when the tool (6) is inserted into the slot (2), the space (19)  
20 diverging towards the central point (17).

2.

System according to Claim 1, w h e r e i n the diameter of the second recess (11) is substantially smaller than the diameter of the first recess (3).

3.

System according to Claim 1 or 2, w h e r e i n the first recess (3) and the second recess (11) have substantially the same depth.

4.

30 Screw constituting part of a system comprising the screw and a tool therefor, in which the screw has a screw head (1) with a top surface and a slot (2), the slot (2) having a first recess (3) adjoining the top surface, the slot (2) having an approximately straight-walled cross section, and in which the slot has a second recess (11) at the bottom of the first recess (3),

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with a smaller diameter than that of the first recess (3), the recess (3) is shaped as a star with six points viewed in the axial direction of the screw, in accordance with the Torx® standard (e.g. ISO 10664), and the second recess (11) has a circular cross section, w h e r e i n the screw comprises a transition surface (15) between the first (3) and second (11) recess, which extends to the second recess (11) at an angle.

5.

Screw according to Claim 4, w h e r e i n the diameter of the second recess (11) is substantially smaller than the diameter of the first recess (3).

6.

~~System~~ <sup>Screw</sup> according to Claim 4 or 5, w h e r e i n the first recess (3) and the second recess (11) have substantially the same depth.

7.

Screw tool constituting part of a system comprising the tool and a screw, the tool is provided with an engagement section (16) and a central point (17), the engagement section (16) of the tool is shaped as a star with six points with substantially parallel walls, in accordance with the Torx® standard (e.g. ISO 10664), and the central point (17) has a circular cross section, w h e r e i n the tool comprises a surface (18) between the engagement section (16) and the central point (17), which extends to the central point (17) at an angle.

8.

Screw tool according to Claim 7, w h e r e i n the central point (17) has a substantially smaller diameter than the engagement section (16).

9.

Screw tool according to Claim 7 or 8, w h e r e i n the central point (17) and the engagement section (16) have substantially the same length.



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(74) Agent: PROTECTOR INTELLECTUAL PROPERTY  
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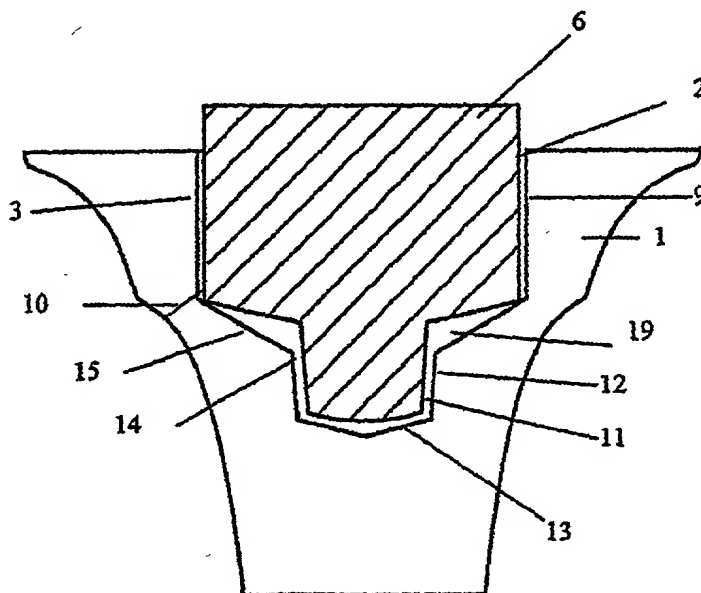
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM COMPRISING A SCREW AND A TOOL THEREFOR



(57) Abstract: System comprising a screw and a tool (6) therefor, in which the screw has a screw head (1) with a slot (2), the slot (2) having a first recess (3) with an approximately straight-walled cross section, and the tool being provided with an engagement section (16) that is complementary to the first recess (3). The slot has a second recess (11) at the bottom of the first recess (3), with a smaller diameter than that of the first recess (3), and the tool (6) is provided with a central point (17) that complements the second recess (11). The second recess (11) has a circular cross section and the central point (17) of the tool (6) has a circular cross section.

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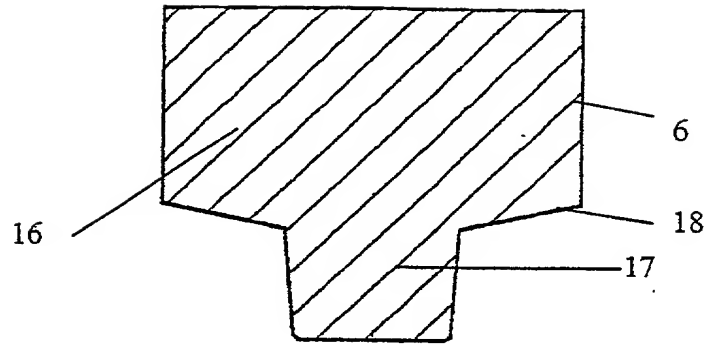


Fig. 1

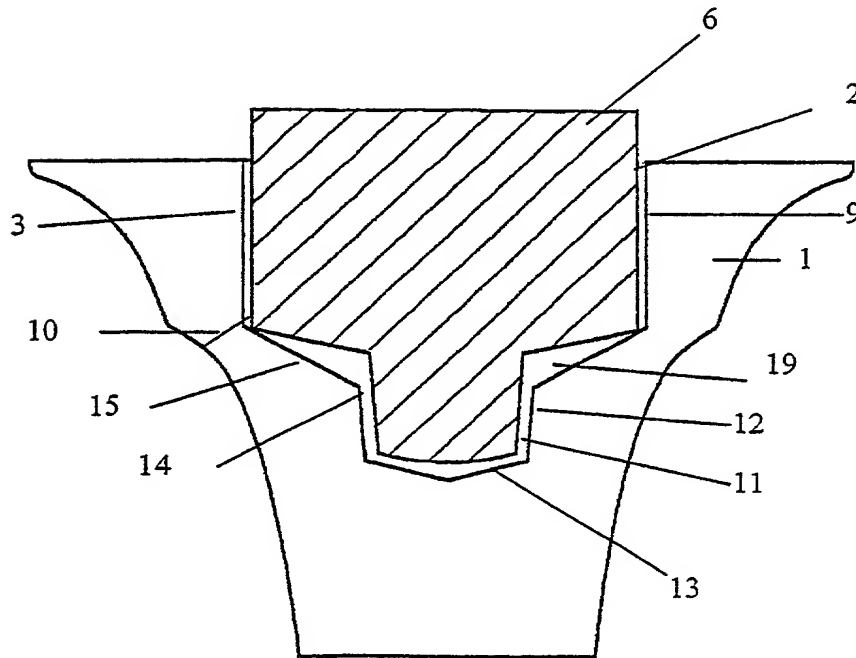


Fig. 2

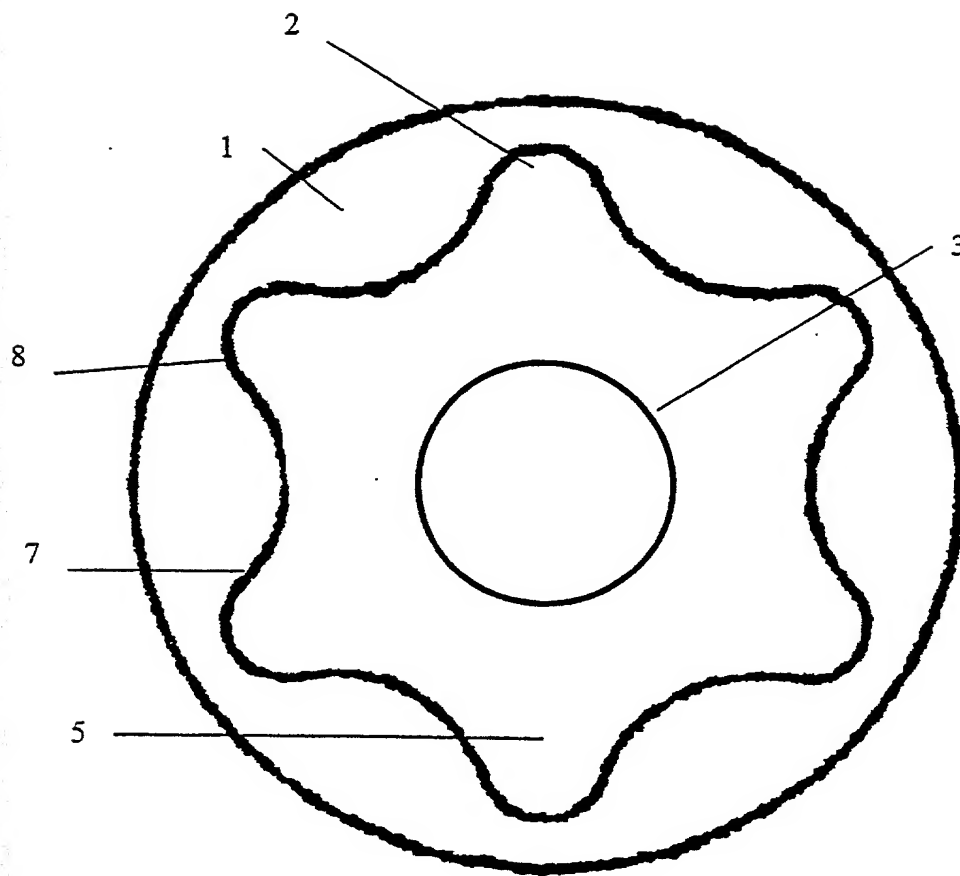


Fig. 3

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# MERCHANT & GOULD

## United States Patent Application

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As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**SYSTEM COMPRISING A SCREW AND A TOOL THEREFOR**

Insert TITLE of invention

Check a or b

The specification of which

a. ☐ is attached heretob. ☐ was filed on \_\_\_\_\_

If "b" checked, complete

as application serial no. \_\_\_\_\_

and was amended on \_\_\_\_\_ (if applicable)

(in the case of PCT-filed application)

If PCT Application

Insert int. application number &amp; filing date

described and claimed in international no. PCT/NO00/00333 filed 9 October 2000and as amended on 5 Nov. 2001 (if any), which I have reviewed and for which I solicit a United States patent.

I hereby state that I have reviewed and understood the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a). (Reprinted on back side).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119/365 of any foreign application(s) for patent of inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

Prior applications  
Check a or ba. ☐ no such applications have been filed,b. ☐ such applications have been filed as follows:

| FOREIGN APPLICATION(S), IF ANY, CLAIMING PRIORITY UNDER 35 USC § 119         |                    |                                      |                                     |
|--|--------------------|--------------------------------------|-------------------------------------|
| COUNTRY  | APPLICATION NUMBER | DATE OF FILING<br>(day, month, year) | DATE OF ISSUE<br>(day, month, year) |
| Norway   | 1999 4934          | 8 Oct. 1999                          |                                     |
| ALL FOREIGN APPLICATION(S), IF ANY, FILED BEFORE THE PRIORITY APPLICATION(S) |                    |                                      |                                     |
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|  |                    |                                      |                                     |
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I hereby claim the benefit under Title 35, United States Code, § 120/365 of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

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|                         |                                      |                                       |
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I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

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| DATE                  |                         | DATE                  |                          | DATE                     |

Print FULL name(s) AND address(es) of actual inventor(s)

Each inventor must sign & date

Note: No legalization or other witness required

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For Additional Inventors:

☐ Check box and attach sheet with same information, including date and signature.